

Abstract

A radio-frequency (RF) radiation suppressor component for use with magnetrons that reduces spurious leakage radiation by absorbing RF radiation, that seats a metal ring connector fixture for making electrical contact to the cathode of the magnetron, and that exhibits improved tolerance of higher operating voltages. An insulated RF suppressor component is comprised of an insulating sleeve member and an outer shell cladding layer made of molded composite iron powder / epoxy resin material that absorbs part of the RF radiation and thus acts as an absorber to reduce magnetron radiation leakage. The insulating sleeve end has a ridged groove indentation to seat a metal clamping ring that contacts the magnetron cathode and provides a terminal connection for the cathode voltage bias and filament heating circuit leads. Testing of prototypes indicates significant improvement in permissible operating voltages and comparable RF suppression compared to conventional RF suppressor components currently in use.